

V. On a Collection of Mammals made by Mr. S. A. Neave in Rhodesia, North of the Zambesi, with Field Notes by the Collector.

BY R. C. WROUGHTON.

(Communicated by Dr. W. E. Hoyle, F.R.S.E.)

Received November 16th, 1906. Read January 29th, 1907.

The area in which Mr. Neave collected may be divided into two portions. The first, lying in the Valley of the Loangwa River, for the most part in the Basenga Country, on the East bank of that river. The forms found here are closely related to those found in Nyasa and Mashonaland—the more northern more closely to the former and the more southern to the latter. The second part of Mr. Neave's collecting ground lies East and West along the common boundary of Rhodesia and the Congo Free State, from the Mchinga Escarpment in the East to the new Rhodesian Station of Ndola on the Kafue River in the West.

It is amongst the forms from this area that those occur for which it has been found necessary to find new names in this paper. The general relationship of this fauna is undoubtedly with that of West, rather than of East Africa, but at the same time there seem to be quite a number of forms showing a curious resemblance to those found on the high plateau between Lakes Nyasa and Tanganyika.

Besides the specimens which have been examined and compared with those in the National Collection, there are a certain number which, on account of their bulk or for

March 13th, 1907.

other reasons, have not been brought to London, and, finally, also a certain number of forms (mostly well known) which were met with by Mr. Neave, but of which specimens were not brought home. These have been included in the list, on his authority, but are distinguished by their names being enclosed in brackets.

Cercopithecus pygerythrus.

Simia pygerythra, F. Cuvier, "Hist. Nat. Mamm.," vol. 24, 1821.

P. 6 ♂. E. bank of Loangwa. June 27, 1905. Alt. 1600.

P. 9 ♀. E. bank of Loangwa. Dec. 18, 1905. Alt. 1800.

"'Pusi' or 'Kolwe' of the Asenga.

"Common, especially in the Loangwa Valley."

[**Papio cynocephalus** (The Baboon)].

"'Kolwe' of most local tribes.

"Baboons are common throughout the country. They are very daring, and do considerable damage to native gardens."

Galago crassicaudatus.

Otolicnus crassicaudatus, E. Geoff., *Ann. Mus. d'Hist. Nat. Paris*, vol. 19, p. 166, 1812.

P. 4 ♀. Bank of Mezi. Sept. 26, 1904. Alt. 1600.

P. 7 ♂. E. bank of Loangwa. Aug. 9, 1905. Alt. 1800.

P. 8 ♀. Bank of Kafue. Oct. 21, 1905. Alt. 4000.

All these specimens are comparatively young and in their grey coat.

There is an unlabelled and mutilated skin, without

skull, which perhaps is the older stage of this or an allied form. The fulvous colouring of the dorsum, &c., is well marked, and the tail is black-tipped.

“A common species, especially in hilly country.

“‘Changa’ of all the local races.”

Galago 'moholi.

Galago moholi, Smith. “Ill. Zool. S. Afr., Mamm.,” 1839, pl. 8.

P. 1 ♂, P. 2 ♂, P. 3 ♂. N. bank of Mezi. Sept. 21, 1904.
Alt. 1400.

P. 5 ♀. Petauke. Nov. 13, 1904. Alt. 2300.

The synonymy throughout this genus is in much confusion. Until this has been cleared up it is fruitless to distinguish geographical races. Smith's *moholi* was described from the Limpopo River.

“‘Kamundi’ of the Asenga, ‘Kasimachali’ of the Alala.”

Rhinolophus æthiops.

Rhinolophus æthiops, Peters, *M. B. Akad. Wiss. Berl.*, 1868,
p. 637.

C. 4, 5 ♀ ♀. Petauke, East Loangwa district. Jan. 24—26, 1905. Alt. 2400.

Dr. Andersen, who has been so kind as to examine these specimens, identifies them as *æthiops*. The species has hitherto only been recorded from Damaraland (type locality) and Angola. The present two specimens are in every respect indistinguishable from British Museum examples from Angola.

“The smaller bats are known to the Manganja and Lake tribes as ‘Namsisi,’ to the Asenga and Awembo as ‘Kasuru.’

“There is also a species of *Rousettus* or an allied fruit-eating bat, of which I did not succeed in obtaining a specimen. This is known to the natives as ‘Kamlima.’”

Nycteris capensis.

Nycteris capensis, Smith, *Zool. Journ.*, 1829, p. 433.

Nycteris fuliginosa, Peters, "Reis. Moss.," p. 46, 1852.

C. 1 ♂. Kapsuku Mountains, S. Rhodesia. Alt. 3400.

Dobson, in his Catalogue, lumps *fuliginosa* with *capensis*. When the genus comes to be worked out it is possible that these two forms will again be separated, in which case, judging from the locality of *fuliginosa* the present specimen will take that name.

Scotæcus hindei.

Scotæcus hindei, Thos., *Ann. Mag. Nat. Hist.*, (7), vol. 7, p. 264, 1901.

C. 2 ♂. Petauke, East Loangwa district. Nov. 14, 1904. Alt. 2400.

This is a most interesting specimen; for, though undoubtedly *S. hindei*, it possesses a very small but quite plainly visible anterior premolar not present in the type and hitherto only known specimen of *S. hindei*. This minute premolar is situated on the inner side of the tooth row, but not inside it, fitting into a notch in the inner side of the cingulum of the canine; this notch is clearly visible in the type of *hindei*, but there is no trace there of the minute premolar. Whether the presence or absence of this small tooth is the truly normal condition in *hindei* is a question which cannot be settled until more specimens are available for examination. It may be noted, however, that both tooth and notch are absent in the other two species (*albofuscus* and *hirundo*) of *Scotæcus*.

Pipistrellus nanus.

Vespertilio nanus, Peters, "Reis. Moss.," p. 63, 1852.

C. 6 ♂. Mterize River, Loangwa Valley. July 24, 1905. Alt. 1800.

Taphozous mauritianus.

Taphozous mauritianus, E. Geoff., "Descr. Egypte," vol. 2, p. 127, 1812.

Though it has a rather larger forearm, this specimen agrees well with specimens in the British Museum collection from British East Africa. It may be noted that this specimen has a forearm of 65 mm., while Dobson gives about 61 as normal.

Macroscelides brachyrhynchus.

Macroscelides brachyrhynchus, Smith, "Ill. Zool. S. Afr.," vol. 1, p. 13, 1838.

I. 1 ♀. Kapsuku Mountains, S. Rhodesia. May 24, 1904. Alt. 3400.

I. 6 ♀—7 ♂. Mseizi River, Feira district. July 19, 1904. Alt. 1500.

I. 16 ♂. Niamadzi River, East Loangwa district. May 31, 1905. Alt. 2200.

I. 17 ♂. Mterize River. July 17, 1905.

I. 19 ♀. Ndola. October 1, 1905. Alt. 4000.

I. 20 ♂. Msofu River, Aiala Plateau. Nov. 7, 1905. Alt. 4000.

The type was taken in the northern part of Bechuana-land, and the present specimens come from what must be the northern limit of the range of the species, which perhaps accounts for some small but not constant differences between them and typical *M. brachyrhynchus*.

"'Niakololo' of the Asenga."

Petrodromus tetradactylus.

Petrodromus tetradactylus, Peters, *Verh. Akad. Wiss. Berl.*, 1846, p. 258.

4 ♂, 5 ♀. Mseizi River. July 11 and 17, 1904. Alt. 1500.

8 ♀. Ntambwa's. Aug. 5, 1904. Alt. 1400.

12 ♀, 13 ♂. Petauke, East Loangwa district. Nov. 21, 1905. Alt. 2400.

14 ♂, 15 ♀. Mbala Country, May 12—13, 1905. Alt. 2000—2600.

These specimens seem quite normal. The type locality is in the Mozambique district of Portuguese East Africa. The British Museum Collection has specimens from Nyasa. These specimens extend the known range at least 10° westward.

"I found these elephant shrews very abundant.

"'Sakwi' of the Chikundo, 'Mtondo' of the Asenga."

Crocidura, sp.

I. 2 ♀. S. bank of Zambesi. June 21, 1904. Alt. 1400.

I. 3 ♀. S. bank of Zambesi. June 21, 1904. Alt. 1400.

I, 9 ♀. Near the Mezi River, Loangwa Valley. Sept. 1, 1904. Alt. 1500.

I. 10 ♀. East of Loangwa River. Sept. 10, 1904. Alt. 1500.

I. 11 ♀. N. bank of Mezi. Sept. 25, 1904. Alt. 1500.

I. 16 ♀. Mterize River. May 25, 1905. Alt. 1800.

I. 17 ♀. E. bank of Loangwa. June 7, 1905. Alt. 1600.

I. 17 ♀. E. bank of Loangwa. June 25, 1905. Alt. 1600.

I. 18 ♀. Road to Chewalla's. Sept. 26, 1905. Alt. 4000.

The species in this genus have been multiplied to an enormous extent, more than 50 species of African *Crocidura* having been described. Peters has described three species from Tette, to any one of which, geographically, the present specimens might belong. Without comparison with the type, it would be rash to select one of the three

names, for none of the descriptions exactly fit ; on the other hand, it would be folly to give a new name, and so risk further confusing the synonymy. The probability is that these specimens represent *hirta*, Peters.

“These small shrews are known to the Asenga as ‘Susungira.’ They have an extremely strong smell.”

Crocidura neavei, sp. n.

I. 20 . Kafue River. Oct. 17, 1905. Alt. 4000.

A medium-sized, dark-coloured *Crocidura*. General colour a very dark brown as in *sylvia*, Thos. and Schw. ; belly and all underparts only slightly paler. Ears rather large. Tail long, slender, dark, almost black, above and below (there is a distinct tuft of white hairs at the tip, below, but this may be an individual character), long hairs limited to the base as in *maurisca*, Thos.

Skull the same size as in *maurisca*, slightly shorter than in *sylvia*, but its greatest breadth as in the latter, markedly less than in the former, the intertemporal breadth greater and the skull markedly flatter (*i.e.*, shallower) than in either of these species. There are no marked peculiarities of dentition, but the upper tooth row behind the canine is slightly shorter than in either *maurisca* or *sylvia*. The maxillary width about as in *sylvia*, markedly greater than in *maurisca*, the anteorbital foramen twice as large as in either of the other species.

The following are the dimensions compared with those of *maurisca* and *sylvia*.

	<i>neavei</i> .	<i>maurisca</i> .	<i>sylvia</i> .
Head and body	80	75	81
Tail	60	60	53
Hind foot	16	14·4	15
Ear	9	?	8·5
Skull : Greatest length	20·5	21	22

	<i>neavei.</i>	<i>maurisca,</i>	<i>sylvia.</i>
Greatest breadth	9	9·5	9
Intertemporal breadth	5·6	5	5·3
Greatest depth	5	5·6	5·5

The long tail and hind feet and long-snouted flat skull, with huge anteorbital foramina, serve to distinguish this form from any other which I know.

[**Mellivora ratel** (The African Ratel)].

“‘Chuuli,’ of the Asenga.

“This animal appears to be fairly common throughout the country, though I did not succeed in obtaining a specimen. The natives are somewhat afraid of it, and have a quaint idea that if it hears a man mention its name, it will become very savage and impossible to kill. It is said to feed largely upon honey and insects of many kinds.”

Ichtonyx, sp.

Ca. 17 ♂. Fort Jameson. Jan. 15, 1906.

The specimen has neither label nor skull, and identification is impossible. It is probably *capensis*, Smith.

“A species which preys largely on mice and rats which it drives from their burrows by means of its stink glands.

“‘Kashulira’ of the Asenga and Alala, ‘Kanyembe’ of the Lake tribes.”

Lutra, sp.

“‘Katumbi’ of the Asenga.”

An otter of some species, probably *L. capensis*, occurs sparingly in the rivers. It is reported to be very abundant from near Lake Bangweolo.

[**Canis**, sp. (Jackal)].

“‘Nkandwe’ of most local tribes.

“Occurs sparingly throughout the country. I only saw one living specimen.”

[**Lycaon pictus** (The Hunting Dog)].

“‘Mmbulu’ of the lake tribes, ‘Pumpi’ of the Asenga.

“This animal is fairly common throughout the country in packs of 4 or 5 to as many as 20 or 30 individuals. It is extraordinarily ferocious, and kills vast quantities of game. It is universally stated by natives to chase lions and will kill their cubs. I heard of no instance of its attacking man. I have witnessed a pack of these dogs hunting on the Loangwa, and they twice drove antelope into the river, one of which was immediately pulled under by crocodiles, the dogs themselves not entering the water at all. One old ♂ specimen was obtained.”

[**Hyæna crocuta** (The Spotted Hyæna)].

“‘Tika’ of the Chikunda, ‘Fisi’ of the Lake tribes, ‘Chimbwe’ of the Asenga.

“The spotted Hyæna is common everywhere. It would usually appear to hunt singly. This cowardly animal becomes very daring on dark and stormy nights, and will steal articles from the middle of a camp. Natives sleeping outside occasionally are severely bitten by them.”

1 ♂ skull.

Viverra civetta.

Viverra civetta, Schreber, “Säugth.,” part 3, p. 418, 1778.

Neighbourhood of Petauke during 1905.

A flat skin labelled 32 without skull, and the skull of a quite young animal.

“‘Mfungu’ of the Asenga, ‘Katumpa’ of the Alala.”

Genetta tigrina.

Viverra tigrina, Schreber, “Säugth.,” part 3, p. 425, 1778.

Ca. 3. N. bank of Mezi, Portuguese East Africa. Sept. 27, 1904. Alt. 1400.

Ca. 5. Mterize River. Nov. 5, 1904. Alt. 2000.

Ca. 8. Mbala Country. May 8, 1905. Alt. 2600.

The specimens undoubtedly belong to the *tigrina* group. Matschie in his monograph of the Genets separates from that species a form under the name of *mossambica*, which, geographically, is the nearest neighbour to the present specimens; he bases, however, on the width of the black rings of the tail and of the dorsal spots, both characters which are liable to vary with the "make up" of the specimen. Messrs. Thomas & Schwann in a list of mammals collected in the Zoutpansberg District of the Transvaal in connection with the "Rudd Exploration," describe a form closely allied to *tigrina* under the name of *letabæ*.* This form is said to have the tail longer than the head and body, otherwise it agrees fairly closely with the present specimens. Under the circumstances I think it safer to place these specimens for the present, at any rate, under the group name *tigrina*.

"Very common throughout the country.

"'Cimba' of the lake tribes and the Asenga, 'Nshimta' of the Alala."

Mungos cafer.

Viverra cafra, Gmelin, Linn., "Syst. Nat.," vol. 1, p. 85, 1789.

Ca. 15 ♀. Near Kapopo. Oct. 26, 1905. Alt. 4000.

"A somewhat scarce species, though widely distributed according to native accounts.

"'Nenga' of the Asenga, 'Chisakanenga' of the Alamba."

Mungos gracilis.

Herpestes gracilis, Rüpp, "N. Wirb. Abyss.," p. 29, 1835.

Ca. 7. Lichunio, near Petauke. April 11, 1905. Alt. 2000.

Ca. 10. Mterize River, Loangwa district. July 25, 1905. Alt. 1800.

* *P.Z.S.*, 1906, p. 578.

Unfortunately, labels are missing from both specimens, but there are two skulls labelled as above which clearly belong to them, but which to which cannot be decided absolutely. Of the two specimens, one with rather coarser grizzling and a bright rufous tinge on the face and crown closely resembles a specimen in the British Museum collection from Zomba, British Central Africa, and the skull, too, corresponds very closely with Ca. 7 (above), allowing for the younger state of the latter which still has its milk canines unshed. The other specimen has the face and crown tinged with black, and closely resembles a specimen in the collection obtained by Mr. Boyd Alexander on the "Right bank of the Zambesi." The skull of this specimen, however, does not correspond well with Ca. 10, which for its size (it is very slightly larger than Ca. 7, and also slightly older, the milk canines having been recently shed) is broader, especially between the bullæ and the canines, and stouter, and has larger bullæ than any specimen I have seen. However, in view of the doubt in the allotment of the skulls, I think the safest course is to identify them merely as *M. gracilis*, to which group both specimens undoubtedly belong.

"'Likongwe' of the Lake tribes and the Asenga."

Mungos, sp.

The specimen is a flat skin, with the feet missing; the label gives the date November 20, 1905, but no locality or serial number, and there is no skull. Identification is impossible beyond that it is a member of the *albicauda* group.

"A native skin obtained at Chiwal's on the Alala Plateau. It had been killed the previous day.

"'Nyanga' of the Alala."

Helogale undulata.

Herpestes undulatus, Peters, "Reis. Moss.," p. 114, 1852.

Ca. 2 ♂. N. bank of Mezi. Sept. 24, 1904. Alt. 1400.

Ca. 4 ♀. N. bank of Mezi. Sept. 28, 1904. Alt. 1400.

Ca. 6 ♀ (yg.). Lichunio, near Petauke. April 11, 1905.
Alt. 2000.

The locality of the type is given by Peters as Mozambique, 10°—15° S. Lat.

"'Lisicherere' of the Asenga. This small species is usually in colonies."

Helogale varia.

Helogale varia, Thos, *P.Z.S.*, 1902, p. 119.

Ca. 16 ♀. Msofu River, Alala Plateau. Nov. 7, 1905.
Alt. 4000.

The locality of the type is Mweru-Nyasa.

Rhynchogale melleri.

Rhinogale melleri, Gray, *P.Z.S.*, 1864, p. 575.

Ca. 12 ♀. Near Msanzara River, Loangwa Valley.
Aug. 7, 1905. (No skull.)

"'Umbi' of the Asenga. Not uncommon, but very hard to obtain specimens of. This specimen killed by a native and the skull unfortunately destroyed."

Crossarchus fasciatus.

Crossarchus fasciatus, Desm., "Dict. Sci. Nat.," vol. 29, p. 58,
1823.

Ca. 1 ♂ (yg.). N. bank of Zambesi, near Feira. June
17, 1904. Alt. 1400.

Ca. 11 ♂ (yg.). Mterize Country. July 27, 1905. Alt.
1800.

Ca. 13 ♀. Bank of Kafue. Oct. 21, 1905. Alt. 4000.

Ca. 14 ♂. Near Kapopo. Oct. 26, 1905. Alt. 4000.

"A very common species, sometimes in colonies.

"'Chipulwe' of most of the local tribes."

[**Felis leo** (The Lion)].

“‘Mkango’ of the Lake tribes, ‘Pandoro’ of the Chikunda, ‘Nkalamo’ of the Asenga.

“Lions are common throughout the country but are seldom seen, especially in the more wooded districts.

“The food of lions appears by no means to consist entirely of large mammals, as they will kill and eat porcupines, cane-rats, etc. I have even had fruits pointed out to me which it was stated formed the food of lions in times of scarcity.”

2 ♀ ♀.

[**Felis pardus** (The Leopard)].

“‘Nyalugwe’ of the Lake tribe, ‘Kaiengo’ of the Asenga, ‘Mbalale’ of the Alala.

“Common throughout the country. The leopard seems to prey largely upon smaller carnivores, and I have several times come across specimens of *F. serval* killed by them. It is also remarkably fond of dogs. Cane-rats too are killed in large numbers by them.”

2 ♂ ♂.

Felis ocreata.

Felis ocreata, Gmelin, “Anh. Bruce Reis,” p. 27, 1791.

Two flat skins, each labelled (34), without skulls, from the neighbourhood of Petauke, Sept.—Nov., 1905.

“Two native skins. These cats are common, but seldom seen.

“‘Madzampaka’ of the Asenga.”

Felis serval.

Felis serval, Erxl., “Syst. Regn. Anim.,” p. 523, 1777.

Ca. 9 ♀. Mterize River. July 16, 1905.

The skull unfortunately is missing, but the skin seems to be a quite normal one.

“‘Njuzi’ of the Chikunda, ‘Mbale’ of the Asenga.”

[**Felis caracal** (The Caracal)].

"I saw one skin of this species which had been obtained in the Northern part of the territory."

Cynælurus jubatus.

Felis jubata, Erxl., "Syst. Reg. Anim.," p. 510, 1777.

(12) sex? Southern Mbala Country. May or June, 1904.

The mane is very strongly marked in this specimen, but Col. Bingham tells me that some years ago he saw a living individual of this species in captivity at Aden, which had been taken in the Somali Country, and which had a mane 4 inches long; this is not, therefore, a specially local character.

A native skin.

"Cheetahs appear to be exceedingly rare in the country.

"'Kambulumbulu' of the Asenga."

Anomalurus cinereus.

Anomalurus cinereus, Thos., *Ann. Mag. Nat. Hist.*, (6), vol. 15, p. 188, 1895.

R. 140 ♀, 141 ♀. Ndola. Oct. 5—7, 1905. Alt. 4000.

"The only two specimens met with. This species appears to be nocturnal in its habits, and to conceal itself in hollow trees by day.

"'Mpepi' of the Alamba. It is also known by the same name on the Angoni Plateau"

Sciurus mutabilis.

Sciurus mutabilis, Peters, *M.B. Akad. Wiss. Berl.*, 1852, p. 273.

R. 74 ♀. Petauke. March 13, 1905. Alt. 2400.

R. 82 ♀, 83 ♂. Petauke. March 30, 1905. Alt. 2400.

R. 132 ♀. Mterize River. July 26, 1905.

R. 127. Mterize River. July 19, 1905.

R. 131. Mterize River. August 25, 1905.

Native skins, Mterize River, May, 1905.

Two flat skins. This series proves how well this species deserved the name *mutabilis*.

"I had quite made up my mind that this series represented two species.

"I found the reddish forms are common and widely spread, and are called 'Kasiri.'

"The dark forms I only obtained from the Mterize River, where they are called 'Kaiaye' by the natives.

"I never saw either form away from the dense jungle on the banks of streams."

Funisciurus annulatus rhodesiæ, sub. sp. n.

R. 137 ♀. Road to Chewalla's. Sept. 27, 1905. Alt. 4000.

R. 145 ♂, 146 ♀ (yg.). Road to Chewalla's. Nov. 14, 1905. Alt. 4000.

Desmarest in his description of *annulatus* gives the colour as "gris-verdâtre clair, provenant de ce que les poils y sont gris à la base et terminés de jaunâtre." He gives no type locality, but a West African squirrel exactly answers his description and has been accepted as *annulatus*. The British Museum possesses specimens of this species from Gambia, Angola, &c. The coloration in the series is very constant, the more northern specimens being on the whole more brightly coloured. The present specimens, while agreeing fully in the general pattern of coloration, can be picked out of the series at a glance, owing to the complete absence of the yellow tinge so characteristic of typical *annulatus*. The hairs of the back are about 15 mm. in length; black for the basal third,

then with a yellowish white ring not quite so broad, the terminal third being black interrupted by a narrow (2—3 mm.) white ring, the general effect being a pale grizzled grey. The cheeks, which in typical *annulatus* are pale buff, are here white, and the streaks above and below the eye are in these specimens a bright silvery white and most conspicuous. The feet also differ from those of *annulatus* in wanting the yellow (or buff) tinge.

The skull is rather larger in all dimensions than that of *annulatus*, the bullæ especially are markedly larger; but the length of the upper molar series is the same in both forms.

Properly measured specimens of *annulatus* of the same age as this adult specimen are not available, but one somewhat younger from Gambia is described by the Collector as head and body 190, tail 210, hind feet 48, ear 16.

The following are dimensions:—

					137 ♀ (type).
Head and body	...	...	...	...	213
Tail	...	...	...	...	219
Hind foot	...	...	...	...	41.5 (?46.5).
Ear	...	...	...	...	16
Skull: Greatest length	...	...	...	...	48
Basilar length	...	...	...	...	36
Zygomatic breadth	...	...	..	..	27
Interorbital breadth...	...	...	...	...	14
Length of upper molar series	...	...	...	...	9
Length of bullæ	...	...	...	...	11
Age	...	...	...	...	Adult.

The tail of this specimen has apparently been damaged during life.

“This species would appear to be confined to the High Plateau country, west of the Mchinga Escarpment. It is

not known to natives of the Loangwa Valley. The Alala call it 'Kapali,' the Alamba 'Lupali,' and the Awisa 'Kwikwi.'"

Funisciurus cepapi.

Sciurus cepapi, Smith, "Rep. Exp. Expl. C. Afr.," p. 43, 1836.

R. 86 ♂. Lichunio, near Petauke. April 6, 1905.
Alt. 2,200.

R. 88 ♂. Lichunio, near Petauke. April 10, 1905.
Alt. 2,200.

R. 108 ♂. Ulungu Mountain. June 11, 1905. Alt. 3000.

R. 113 ♂. Ulungu Mountain. June 13, 1905. Alt. 3000.

R. 116 ♀. E. bank of Loangwa. June 18, 1905.
Alt. 2200.

The last two of the above series are brighter than the co-type of *cepapi*, which is in the British Museum collection, and are quite like a specimen sent by Sir H. Johnston from Monkey Bay, on Lake Nyasa; while the first three on the other hand are much duller coloured. That they all are *cepapi*, however, there seems to be no doubt.

"This species is seldom met with except on 'Mopani' flats, near the larger rivers. 'Gologolo' of the Manganja and Lake tribes, 'Kasidye' of the Asenga."

Graphiurus murinus.

Myoxus murinus, Desm., "Mamm.," Suppl., p. 542, 1822.

R. 91 ♀. Petauke. April 25, 1905. Alt. 2400.

R. 92 ♀. Mbala Country. April 28, 1905. Alt. 2600.

R. 94 ♀. Mbala Country. May 2, 1905. Alt. 2600.

"'Kasulamo' of the Asenga."

Graphiurus nanus.

Myoxus (Eliomys) nanus, de Wint., *P.Z.S.*, p. 799, 1896.

R. 15 ♀. Mseize River. July 18, 1904. Alt. 1500.

R. 40 ♀, Petauke. Nov. 18, 1904. Alt. 2400.

18 WROUGHTON, *Collection of Mammals from Rhodesia.*

R. 60, 61 ♀ ♀. Petauke. Feb. 10, 1905. Alt. 2400.

R. 133 ♀. E. bank of Loangwa. August 11, 1905.
Alt. 1600.

R. 147. Petauke. Dec. 12, 1905. Alt. 2400.

“Not distinguished by natives from the last species.”

Tatera lobengulæ mashonæ.

Tatera lobengulæ mashonæ, Wrought., *Ann. Mag. Nat. Hist.*,
(7), vol. 17, p. 476, 1906.

R. 2, 5 ♂. S. bank of Zambesi. May 28, 1904.
Alt. 1250.

R. 1 ♂. No skin. Feira-Zambesi. May 26, 1904.
Alt. 1250.

R. 25 ♂. East of Loangwa. Portuguese East Africa.
Sept. 10, 1904. Alt. 1400.

R. 41, 51 ♂, 71 ♀. Petauke. Nov. 18 and 19, 1904,
and March 9, 1904. Alt. 2400.

“‘Mpundu’ of the Asenga.”

Tatera panja.

Tatera panja, Wrought., *Ann. Mag. Nat. Hist.*, (7), vol. 17, p.
476, 1906.

R. 3 ♀. S. bank of Zambesi. May 27, 1904. Alt. 1250.

Tatera neavei, sp. n.

R. 128, 139 ♀ ♀. Ndola. October 2, 1905. Alt.
about 4000.

A rather small *Tatera*, much resembling *nigrita* in general appearance, but having a marked pale (albescent) streak on the face, above and below, from about the middle of the eye extending to the ear; this streak, however, is broken by a blackish patch just below the base of the ear. The skull dimensions are also as in *nigrita*, but so far as the material available shows, the interparietal is

longer and much more convex posteriorly, giving a posteriorly tapering look to the skull when viewed from above. The grooves of the incisors are obsolescent.

The following are measurements of these two specimens and of the type of *nigrita*.

	R. 138 (type).	R. 139.	<i>nigrita</i> ♀.
Head and body	130	124 (?134)	135
Tail	127	132.5	140
Hind feet	33.5	34	32
Ear	20	22	20
Greatest length of skull ...	38	?	38
Basilar „ „ ...	29	?	30
Zygomatic breadth	20	?	20
Length of upper molar row ...	6	6	6
Ant. post. : length of bullæ ...	10.5	?	11

All these specimens are fully adult.

In my review of the Genus *Tatera*,* I pointed out that short-tailed forms were characteristic of the country between the Zambesi and the Equator. In this character *neavei* supports my view, but instead of resembling *nyasæ* or *nyasæ shirensis*, its near neighbours, it must in my key (l.c., p. 477) be placed at the end of the first group of Section II. under c. with the Uganda form *nigrita*. From that species it may be distinguished exteriorly by the face marking, by the comparatively shorter tail and larger hind feet. In skull characters the most distinctive is the obsolescence of the grooves of the incisors, as in *fallax*, which suffices to distinguish it from any *Tatera* of its size.

“The note in my diary on this species says ‘Perhaps a variety of “Mpundu,” but a much less red skin. Typical “Mpundu” also occur here.’”

* *Ann. Mag. Nat. Hist.*, (7), vol. 17, p. 474, 1906.

Gerbilliscus boehmi.

Gerbillus boehmi, Noack, *Zool. Jahrb.*, vol. 2, p. 241. 1888.

R 101 ♀. Mbala Country. May 7, 1905. Alt. 2600.

R 104. Mbala Country. May 13, 1905. Alt. 2600.

The type came from Tanganyika and was distinctly smaller, in all dimensions, than these specimens, but there is a specimen from the Nyika Plateau, British Central Africa, which is almost as large.

"I had heard of the existence of this species long before I succeeded in obtaining specimens. It prefers somewhat open sandy country, living in burrows. It is exceedingly active. The Asenga call it 'Mtoroka' and state that adult males are *much* larger than either of the above specimens."

Dendromys pumilio.

Dendromys pumilio, Wagn., *Münch. Gel. Anz.*, vol. 12, p. 437, 1820.

R 21 ♂. Pakolwe Mountain. August 20, 1904.

R 26, 30 ♂, 29 ♀. Portuguese East Africa. Sept. 10—12, 1904.

R 34 ♂. Mterize River. Oct. 31, 1904.

These specimens are quite the same in all essential characters as a series from Nyasa in the British Museum Collection. No species have been described from this part of Africa and the material available for examination is rather meagre. It seems to me best to refer these specimens, at any rate for the present, to one of the two South African species. Skulls which have been identified as *mesomelas* Brants are consistently distinguishable by the shape of the frontals from the present specimens which I therefore call provisionally *pumilio*.

"This small species is said to be especially common in Banana plantations. 'Msuntwa' of the Lake tribes as well as of the Asenga."

Steatomys pratensis.

Steatomys pratensis, Peters, *S.B. Akad. Wiss. Berl.*, 1846, p. 258.

Steatomys edulis, Peters, "Reis. Moss.," p. 163, 1852.

R. 13 ♀, 14 ♂. N. bank of Zambesi. July 16, 1904.
Alt. 1500.

R. 52, 53 ♀ ♀. Petauke. Dec. 24, 1904. Alt. 2400.

R. 56 ♂, 57 ♀. Petauke. Dec. 29, 1904. Alt. 2400.

R. 87 ♂. Lichunio, near Petauke. April 7, 1905.

"This species, which is very common, is called 'Ngambwa' by the Asenga. I was much struck by the fact that a large number of the individuals I saw, were *blind* in one or both eyes.

"When I was in the Mbala Country on May 4, 1905, six specimens of this mouse were dug out of a burrow in the middle of my camp. Of these two were blind in both eyes and two others in one eye.

"All mice and rats are eaten by the natives, but this is considered a special delicacy on account of its fat."

Mus rattus.

Mus rattus, Linn., "Syst. Nat.," ed. x., p. 61, 1758.

R. 18 ♂. Ntambwa's. August 3, 1904. Alt. 1400.

R. 19 ♀. Ntambwa's. August 5, 1904. Alt. 1400.

R. 49 ♂. Petauke. December 17, 1904. Alt. 2400.

? ♀. ? ? ?

These are not unlike specimens of *rattus* from the Nyika Plateau, British Central Africa, but there is less brown in the colouring, and the skull is somewhat shorter and wider.

"'Koswe' of all local tribes. It is a great pest in many native villages."

Mus walambæ, sp. nov.

R. 135 ♀. On the Plateau. September 12, 1905.
Alt. 4000.

R. 142 ♂. Kafue River. Oct. 19, 1905. Alt. 4000.

R. 143 ♂. Msofu River. Nov. 8, 1905.

A medium sized rat with the outward characters and proportions very much as in *hindei*, Thos. from British East Africa. Fur soft and glossy; hairs of back about 10 mm. in length. General colour bright tawny, dulled by the dark slate almost black bases of the hairs showing through; paler on the sides. Cheeks, throat and belly dull white (the hairs with slatey bases), the last not sharply defined from the upper side. Tail short, above brown, darkening distally to almost black, below dull white also darkening towards the tip.

The skull characters on the whole as in *hindei* but the anteorbital plate, though "not concave below" as in *hindei*, shows a distinct angle where the upper and anterior edges meet as in *nyikæ*. The palate, however, does not extend backwards as in *hindei*, not even so much so as in *nyikæ*; both molars and bullæ larger than in either *hindei* or *nyikæ*.

The dimensions are as follows.

	(Type). <i>hindei.</i> <i>nyikæ.</i>				
	R.135	R.142	R.143	—	—
Head and body	150	147.5	155	179(?)	157
Tail.....	124.5	120	128	124	151
Hindfoot	25.5	26	25	27.3	27
Ear	21.5	20	20	19	18
Skull: greatest length...	37	37	37	38	35.5
Basilar length	32	31.5	32	30	?
Zygomatic breadth	20	20	21	19.7	19
L. of upper molar series...	7	7	7	5.9	6.7
Ant. post length of bullæ	8	8	8	7	6.5
Age and Sex... adult ♀		old ♂	old ♂	adult ♀	

Though geographically *nyikæ* intervenes, *walambæ* certainly more nearly resembles *hindei*, the brighter colouring and larger molars and bullæ serve to distinguish

it. From *nyikæ* as from its other neighbour *chrysophilus* its short tail at once separates it, and its broader skull and much larger bullæ serve to further distinguish it from *nyikæ*.

“‘Mtuku’ of the local natives. Inhabits swampy grass country and is seldom trapped.”

Mus. sp. (multimammate).

R. 4 ♀ (yg.). S. bank of Zambesi. May 27, 1904. Alt. 1250.

R. 12 ♀ (yg.). North of Zambesi. July 14, 1904. Alt. 1500. (No skull).

R. 20 ♂. Ntambwa's. Aug. 6, 1904. Alt. 1400.

R. 22 ♂. Portuguese East Africa. Aug. 26, 1904. Alt. 1400.

R. 72 ♂ (yg.), 73 ♀. Petauke. March 13, 1905. Alt. 2400.

R. 80 ♀. Petauke. March 29, 1905. Alt. 2400.

(R 99 ♂?). Mbala Country. May 6, 1905. Alt. 2600.

? ♂. ? ? ?

Mr. Thomas, writing (*P. Z. S.*, 1897, p. 936) on some rats similar to these from Nyasa, spoke of them as “belonging to the groups characterized respectively by “their numerous mammæ (multimammate) and by having “the mammary formula $3-2=10$. It is impossible to “work them out more definitely at present.” No one has yet so far as I know, tackled this problem. The present specimens seem to belong to a form having 8 pair of mammæ.

“‘Mtika” of all the local tribes. This species swarms all over the country. I have trapped as many as 80 specimens in a single night.”

Thamnomys dolichurus.

Mus dolichurus, Smuts, “Enum. Mamm. Cap.,” p. 38, 1832.

Mus arborarius, Peters, “Reis. Moss.,” p. 152, 1852.

- R. 36 ♀. Petauke. Nov. 13, 1904. Alt. 2300.
R. 46 ♀. Petauke. Dec. 12, 1904. Alt. 2400.
R. 62 ♂. Petauke. Feb. 12, 1905. Alt. 2400 (no skull).
R. 76 ♀. Petauke. March 21, 1905. Alt. 2400.
R. 84 ♀. Petauke. April 3, 1905. Alt. 2400.
R. 93. Mbala Country. May 2, 1905. Alt. 2600.
R. 117. E. bank of Loangwa. Portuguese East Africa. June 23, 1905. Alt. 2000.
R. 119 ♂. E. bank of Loangwa. Portuguese East Africa. June 27, 1905. Alt. 2200.
R. 120 ♀. E. bank of Loangwa. Portuguese East Africa. July 4, 1905. Alt. 2200.
R. 123 ♀. E. bank of Loangwa. Portuguese East Africa. July 6, 1905. Alt. 2200.
R. 148 ♀. Petauke. Dec. 29, 1905. Alt. 2400.

These specimens have longer tails (both absolutely and proportionately to the body) than Peters' *arborarius*. Specimens from Ruwenzori recently received by the British Museum have tails as long, but the body also is slightly longer.

Smuts' *dolichurus* from the Cape is said to have a black mark before and under the eye, and a golden tinge on the belly (I cannot detect either of these characters in Smuts' plate), and Peters relies on these characters to distinguish *dolichurus* from his *arborarius*. Sundevall's *pædulcus* is said to have a much shorter tail. None of these types is available for examination by me. Mr. Thomas has used *dolichurus* for Nyasa specimens, so, at any rate for the present, these specimens must rank as *dolichurus*.

"This species is known to the Asenga as 'Sakasse.'"

Mus, sp.

- R 59 ♀. Petauke. Jan. 27, 1905. Alt. 2400.
R 103 ♂. Mbala Country. May 9, 1905. Alt. 2600.
R 105 ♀. Mbala Country. May 17, 1905. Alt. 2600.
R 121 ♀. E. bank of Loangwa. July 4, 1905. Alt.

2200.

These specimens represent more than one form but in such a difficult group and with so little material I hesitate to give them names.

Mus chrysophilus.

Mus chrysophilus, de Wint, *P.Z.S.*, 1896, p. 801.

R 8 ♀ (yg.). S. bank of Zambesi. June 21, 1904. Alt. 1400.

R 48 ♂ (yg.). Petauke. Dec. 14, 1904. Alt. 2400.

R 66 ♂. Petauke. Feb. 23, 1905. Alt. 2400.

R 97 ♂. Metambadzi River. May 4, 1905. Alt. 2600.

R 102 ♂. Mbala Country. May 8, 1905. Alt. 2600.

R 109 ♀. Ulungu Mountain. June 12, 1905. Alt. 3000.

R 111 ♀, 112 ♀. Ulungu Mountain. June 13, 1905. Alt. 3000.

R 118 ♀. E. bank of Loangwa. June 27, 1905. Alt. 2,200.

The type locality is Mashonaland.

Saccostomus campestris.

Saccostomus campestris, Peters, *M.B. Akad. Wiss. Berl.*, 1846, p. 258.

Saccostomus lapidarius, Peters, "Reis. Moss.," p. 167, 1852.

R. 9 ♂. Sixty miles west from Feira. June 25, 1904. Alt. 1400.

R. 16 ♀. Mseize River. July 19, 1904. Alt. 1500.

R. 45 ♀. Petauke. December 11, 1904. Alt. 2400.

R. 50 ♂, 57 ♀. Petauke. December 18, 29, 1904. Alt. 2400.

- R. 67 ♀. Petauke. Feb. 24, 1905. Alt. 2400.
R. 69 ♀. Petauke. March 2, 1905. Alt. 2400.
R. 96 ♀. Mbala Country. May 2, 1905. Alt. 2600.
R. 106 ♂. Mterize River. May 23, 1905. Alt. 2400.
“‘Fundwe’ of the Asenga. A common species.”

Acomys selousi.

Acomys selousi, de Wint., *P. Z. S.*, 1896, p. 807.

- R. 38 ♂, 43 ♀. Petauke. Nov. 16, 30, 1904. Alt. 2400.
R. 58 ♂. Petauke. Jan. 26, 1905.
R. 65 ♂. Petauke. Nov. 20, 1905.
R. 107 ♀. Miamadzi River. June 2, 1905.
R. 110 ♀. Ulungu Mountain. June 13, 1905.
(?) R. 128 ♀, 129 ♀. Mterize Country. July 24, 1905.

These specimens agree well with a series in the National Collection from the Nyika Plateau, British Central Africa. They resemble *selousi* from Matabeleland, but have the tail shorter than the head and body, while in *selousi* it is longer. Without spirit specimens I do not venture to separate this form from *selousi*.

“A rather local species. I never met with it near the Zambesi or in the Feira district. It is a very difficult species to obtain good specimens of, owing to its fragile skin. The Asenga call it ‘Mphula.’”

Leggada musculoïdes.

Leggada musculoïdes, Temm., “*Esq. Zool. Guinée*,” p. 161, 1853.

- R. 10 ♂. Mseizi River. July 13, 1904.
R. 55 ♂. Petauke. Dec. 28, 1904.
R. 81 ♀. Petauke. March 30, 1905.

“Both this and the next species are called ‘Niamgolwa’ by the Asenga. They are not very common, but

are very destructive in one's tent on account of their habit of gnawing clothes."

Leggada minutoïdes.

Leggada minutoïdes, Sm., *S.A.Q. Journ.*, vol. 2, p. 167, 1835.

R. 23 ♀. Portuguese East Africa. August 26, 1904.

R. 37 ♂. Petauke. Nov. 14, 1904.

? ? ?

Arvicanthis dorsalis.

Mus dorsalis, Smith, "Ill. Zool. S. Africa," pl. 46, 1849.

R. 7 ♀. S. bank of Zambesi. June 21, 1904. Alt. 1400.

R. 17 ♀. N. bank of Zambesi. July 19, 1904. Alt. 1500.

R. 28 ♂. E. bank of Loangwa, Portuguese East Africa. Sept. 11, 1904. Alt. 1400.

R. 39 ♀. Petauke. Nov. 16, 1904. Alt. 2400.

R. 42 ♂. Petauke. Nov. 22, 1904. Alt. 2400.

R. 54 ♂. Petauke. Dec. 26, 1904. Alt. 2400.

R. 89 ♂. Lichunio, near Petauke. April 12, 1905. Alt. 2200.

R. 100 ♀. Mbala Country. May 6, 1905. Alt. 2600.

R. 107 ♂. E. bank of Loangwa. June 6, 1905. Alt. 2200.

R. 115 ♂. Ulungu Mountain. June 15, 1905. Alt. 3000.

R. 134 ♂. E. bank of Loangwa. Aug. 14, 1905.

Smith's type had a tail equal in length to the head and body, and a co-type in the British Museum Collection indicates the same proportion. Specimens from Mashonaland also show this proportion, while those from Zululand, N.W. Transvaal, &c., have a tail considerably longer than the head and body, as have the present specimens.

"A common species. It is called 'Yendakadzua' by the natives, which means 'he that walks in the Sun.'"

Pelomys fallax.

Pelomys fallax, Peters, "Reis. Moss," p. 157, 1852.

R. 24 ♂. E. bank of Loangwa. September 3, 1904.
Alt. 1400. (Skull missing).

R. 27 ♀. E. bank of Loangwa, Portuguese East
Africa. September 11, 1904. Alt. 1400.

R. 78 ♀. Petauke. March 23, 1905. Alt. 2400.

R. 125 ♀. E. bank of Loangwa. July 9, 1905. Alt. 2200.
The type locality is Boror in Mozambique.

"A somewhat uncommon species, called 'Mendi' by
the Asenga."

Georychus amatus, sp. n.

R. 144 ♂. Road to Chiwali's, Alala Plateau. Nov. 13,
1905. Alt. 4000.

Rather smaller than *darlingi*, Thos., from Mashona-
land, which is its nearest neighbour. Fur and colour as in
darlingi, *i.e.*, fawn, much modified by the dark slate-
coloured bases of the hairs which show through (at any
rate in a made up skin). The white frontal patch so con-
sistently characteristic of *darlingi* is, however, entirely
absent. A white patch from the corner of the mouth
extending backwards to a line drawn vertically through
the ear, and downwards on to the chin and throat. This
patch I find present in some quite young specimens of
darlingi and indicated in some older ones, but I have
found it in no other species which I have seen. Though
the premaxillary processes and anteorbital foramina are
shaped much as in *darlingi*, the skull is distinctly lighter
and narrower with much smaller bullæ.

The following are dimensions as compared with
darlingi (type), the latter is a much younger specimen
than the present one, otherwise I believe the skull
differences would have been greater.

	144 ♂ (type)	<i>darlingi</i> (type).
Head and body ...	105	128
Tail	10	12
Hind foot	20	22
Skull: Basilar length ...	27.5	26.2
Nasals	11 × 3.3	10.8 × 3.1
Interorbital breadth ...	10	10
Zygomatic breadth ...	22	22.6
Intertemporal breadth...	6	7
Supra auricular breadth	13	14.1
Palate from henselion ...	19.3	19.3
Diastema	10.5	10.1
Upper Molar row length	5.1	5.7
Base of incisors breadth ...	4.8	4.6
Bullæ, ext. post: to int-ant. diameter... ..	7.5	9

“The only specimen met with, but said by natives to be commonly captured on the High Plateau country in the rainy season.

“This species does not appear to inhabit the Loangwa Valley.

“It is called ‘Kakoko’ by the Alala and Awisa.”

Heliophobius argenteo-cinereus.

Heliophobius argenteo-cinereus, Peters, “Reis. Moss.,” p. 140, 1852.

- R. 35 ♀. Mterize River. Nov. 4, 1904. Alt. 2000.
- R. 44 ♀ (yg.). Petauke. Dec. 9, 1904. Alt. 2400.
- R. 47 ♀ (yg.). Petauke. Dec. 12, 1904. Alt. 2400.
- R. 75 ♂ (yg.). Petauke. Dec. 14, 1905. Alt. 2400.
- R. 79 ♀ (yg.). Petauke. March 24, 1905. Alt. 2400.
- R. 85 ♂, Petauke. April 3, 1905. Alt. 2400.
- R. 95 ♂. Mbala Country. May 2, 1905. Alt. 2400.
- R. 98 ♀. Mbala Country. May 5, 1905. Alt. 2600.

The type locality is Tette. In skull characters these specimens differ a little from Peter's plate of *argenteo-cinereus*, especially in having the postorbital processes more marked, and in this they approach *robustus*, Thos., from the Mpika Plateau. These differences, however, are insufficient to justify their separation from *argenteo-cinereus*.

"Common everywhere, but hard to obtain except during the rains.

" 'Mppuko' of all local tribes."

Lepus whytei.

Lepus whytei, Thos., *P.Z.S.*, 1894, p. 142.

R. 64 ♀. Petauke, East Loangwa District. Feb. 14, 1905. Alt. 2400.

R. 90 ♂ (yg.). Lichunio, near Petauke. April 14, 1905. Alt. 2200.

R. 124 ♀ (yg.) E. bank of Loangwa. July 7, 1905. Alt. 2200.

The skull is larger than in typical *whytei*, but the colouring and essential skull characters distinguish it as undoubted *whytei*.

"These hares are distinctly scarce.

" 'Kalulu' of all the tribes in this part of Africa. For some reason, which it is not easy to see, the hare is considered by natives to be an exceedingly cunning animal, and figures as such in all their folk-lore."

Thryonomys swinderenianus.

Aulacodus swinderenianus, Temm., "Mon. Mamm.," vol. 1, p. 245, 1827.

R. 31, 32. Mezi River. September 26, 1904. Alt. 1400.

R. 33 ♂. N. bank of Mezi. October 4, 1904. Alt. 1400.

R. 122 ♂. E. bank of Loangwa. July 5, 1905. Alt. 2200.

There are two skins without labels which belong probably to R. 31 and 32 above, while the skull of R. 33 is missing.

“‘Gunguzi’ of the Achawa, ‘Nchenzi’ of the other Lake tribes and the Asenga, ‘Nsenzi’ of the Alala, Awisa and Awemba.

“These cane-rats, which are common in suitable localities are excellent eating, as I can testify from personal experience.”

Hystrix africa-australis.

Hystrix africa-australis, Peters, “Reis. Moss.,” p. 170, 1852.

R. 130 (yg.) ♀. Mterize Country. July 25, 1905.

R. ?. Near Petauke. June, 1905. (No skin.)

“‘Nungu’ of the Manganja and Lake tribes, ‘Nunji’ of the Asenga.

“Porcupines are exceedingly common all over the country, but are seldom seen owing to their nocturnal habits.”

[*Procavia*, sp.].

“Dassies were reported by natives to occur on the rocky sides of hills in one or two places, but I did not succeed in obtaining any specimens.

“‘Mbira’ of the Nyasa tribes.”

[*Elephas africanus* (The African Elephant)].

“‘Njobvu’ of the Lake tribes, ‘Njovu’ of the Asenga, ‘Nzobvu’ of the Alala and Alamba.

“Still common in the country and reported abundant from the more northern districts. Large specimens are now rare in the Loangwa valley. With the present efficient protection the elephant should increase in this part of Africa.”

One ♂ immature.

[**Rhinoceros bicornis.**]

“‘Chipembere’ of most native races, ‘Ukoli’ of the Alamba.

“The Rhinoceros is by no means uncommon in the Loangwa valley, but is not very often seen.”

[**Equus burchelli** (Burchell’s Zebra)].

“‘Mbidzi’ of the Lake tribes, ‘Mbwete’ of the Asenga.

“Zebras are enormously abundant nearly all over the country, not having suffered from the rinderpest of some years ago. They prefer hilly country, and can travel with ease over remarkably steep slopes. Solitary stallions, which have been turned out of the herd, are not infrequently met with amongst herds of other game, especially Mpala or Haartebeeste. I have even seen them with pig.”

1 ♂.

Potamochoerus chæropotamus.

Sus Koiropotamus, Desmoul., “Dict. Class. Hist. Nat.,” vol. 17, p. 139, 1831.

A quite young individual.

“Bush pigs are common, and do a considerable amount of damage to native gardens. It is perhaps more local than the Warthog, and, inhabiting denser bush, is seldom seen. The sow gives birth to 5 or 6 young at a time. The young are striped. ‘Nguluwe’ of most local tribes.”

1 ♀ skull, ad.

[**Phacochoerus? africanus.**]

‘Njiri’ of most of the local tribes.

“Common all over the country. Generally solitary or in pairs, occasionally an old sow and her family may be met with. Three at a birth seems to be the almost invariable

number for this species, the young being black like the parents. The Warthog has a very curious habit of kneeling down on its forelegs when digging in the ground for roots, etc."

1 ♀.

[**Hippopotamus amphibius** (The Hippopotamus)].

"'Mvu' of most local tribes.

"There are still plenty of this great beast in the Zambesi, but in the Loangwa River they are comparatively scarce. I found them abundant in the upper waters of the Kafue and obtained a fine old solitary male there. The river which is known to Europeans as the Kafue has, as a matter of fact, many native names in various parts of its course Kafue, Kafukwe, Kavuu, Livu, Livubu, all of which signify the presence of this beast."

1 ♂.

[**Giraffa camelopardalis** (The Giraffe)].

"'Niamalikiti' of the Chikunda, 'Lumba' of the Asenga.

"There are a few of this animal still left in the mid-Loangwa Valley. They are now totally protected. A specimen, a fine old bull, shot by Mr. H. S. Thornicroft for the British South Africa Company, did not at first sight appear to differ materially from specimens of those from south of the Zambesi."

[**Bubalis lichtensteini** (Lichtenstein's Haartebeeste)].

"'Ngondo' of the Lake tribes, 'Nkonze' of the Asenga, 'Kondikondi' of the Alala.

"Common and widely distributed throughout the country, but prefers the more open districts of the high plateau, where it may often be seen in herds of from 20 to 30 individuals."

Two ♂ ♂.

[**Connochaetes taurinus** (The blue Wildebeeste)].

“‘Nyumbu’ of all the local tribes.

“This animal occurs very sparingly in the Loangwa Valley, especially to the north. I found it exceedingly shy and only obtained one specimen, a female.”

1 ♀.

[**Cephalophus sylvicultor** (The yellow-backed Duiker)].

“‘Chikwinti’ of the Alamba.

“Appears to occur sparingly near the Upper Kafue. From a very circumstantial native story one specimen appears to have been recently trapped on the banks of the Loangwa River. It seems to be a very shy animal, inhabiting for the most part dense jungle.”

1 ♂.

[**Cephalophus natalensis** (The red Duiker)].

“‘Guapi’ of the Chikunda, ‘Insia’ of the Asenga.

“This little buck is common all over the country. It seems to prefer somewhat wooded districts.”

2 ♂ ♂.

Cephalophus nyasæ.

Cephalophus nyasæ, Thos., *Ann. Mag. Nat. Hist.*, (7), vol. 9, p. 58, 1902.

The specimen does not altogether agree with typical *nyasæ* especially in skull characters but neither does it agree with the description of *nyasæ defriesi*, Rothsch. This subspecies is based on specimens from the country between Mwaru and Tanganyika and also from the Kafue River, while typical *nyasæ* is from Mlanje, British Central Africa, so that geographical considerations are here no good in choosing a name. With only one specimen and without having seen the type of *defriesi* I prefer to call this specimen *nyasæ*.

“Inhabits dense jungle and is only obtained by snaring. It is called ‘Campalanga’ by the Alamba, and is said to feed largely on fruit.”

Oreotragus aceratos.

Oreotragus aceratos, Noack, *Zool. Anz.*, p. 11, 1899.

29. A single ♂ from the hills near Petauke.

“‘Chinkoma’ of all the local tribes.

“Klipspringers are somewhat scarce throughout the country mainly, apparently, owing to the rarity of suitable localities.”

[**Ourebia**, sp. (The Oribi)].

“Called ‘Chosimbe’ and ‘Mphwintio’ (in imitation of its cry) by the Asenga.

“Occasionally seen in pairs in the more open parts of the country.”

Raphicerus sharpei.

Raphicerus sharpei, Thos., *P.Z.S.*, 1896, p. 796.

30 ♂. Near Petauke. Dec., 1905.

The type was from Angoniland; the present specimen is younger and has lighter horns and a greater proportion of white hairs on the back, but is undoubtedly *sharpei*.

“This species is fairly common throughout the country. It is not unlike a hare in its habits often lying close in the grass until nearly trodden on.

“It is called ‘Kasenye’ by the Lake tribes, ‘Kafundu’ by the Asenga, ‘Timba’ on the Alala Plateau.”

[**Kobus vardoni** (The Puku)].

“‘Seula’ of most neighbouring tribes.

“The Puku is common near the larger rivers, especially near the Kafue. It is usually in herds of 20 to 30 individuals, containing, however, as a rule, only one adult male.”

2 ♂ ♂.

[**Kobus ellipsiprymnus** (The common Waterbuck)].

“ ‘Niakozwe’ of the Chikunda, ‘Chuzu’ of the Asenga, ‘Mkulu’ of the Alala.

“ A common antelope occurring in very large numbers on the banks of the Loangwa River. It does not, however, develop as large horns as South African examples. The largest I obtained measured $28\frac{3}{4}$ inches on the curve. I only heard of one specimen over 30 inches being shot. *Kobus defassa* (the Sing Sing) is reported from further north, as also is *Kobus leche* (the Lechwe), locally known as ‘Inja.’”

2 ♂ ♂.

[**Aepyceros melampus** (The Palla or Impala)].

“ ‘Mpala’ of all local tribes.

“ This antelope is very abundant throughout the Loangwa Valley, much scarcer on the plateau toward the Kafue. It affects a particular type of country, viz., the ‘Mopani’ flats, near the larger rivers, and is seldom seen elsewhere. It would seem to have a singular aversion to long grass or dense bush, and can scarcely be driven into it. Specimens from the Loangwa and Zambesi valleys are consistently much smaller both in bulk and in horns than those from British East Africa. A pair of horns measuring over 20 inches is exceedingly rare from this country.”

2 ♂ ♂.

[**Egocerus equinus** (The Roan)].

“ ‘Chiroko’ of the Asenga, ‘Mpewa’ of the Alala.

“ This is perhaps the commonest and most widely distributed of all the larger antelopes in the country. Specimens with long horns are however rare, especially on the Alala Plateau. This is not a little remarkable, as

from that country come the finest Sable horns in Africa. The explanation is probably to be looked for in the food supply, the Sable being much more of a leaf and shrub eater than the Roan. The idea that these two species do not occur together is quite erroneous, as they may be found together over a large area. I have even seen them feeding within a few hundred yards of each other."

1 ♂ ♂.

[*Egocerus niger* (The Sable)].

"'Mpalapala' of the Lake tribes, 'Ntuwakanwa' and 'Mpenembe' of the Asenga.

"The Black Bulls are called 'Niambuzi' or 'Ngombengombe' by the Asenga, and 'Nkumbi' by the Alala.

"There is some confusion in the native minds between the Sable and Roan, owing to the redness of the females of the former.

"Occurs in fair numbers on the higher plateau, especially towards the Kafue, where very large specimens are met with. I once met with a herd of over 50 individuals. The horns of the largest specimen brought to England measured nearly 48 inches on the curve. The Sable on this plateau belong to the form in which the cows do not darken with age, but remain a bright reddish colour."

2 ♂ ♂, 1 ♀.

[*Tragelaphus spekei* (The Situtungu)].

"'Sowe' of the Awisa.

"Is said to occur fairly numerously in the more northern portion of the territory."

1 ♂.

[**Tragelaphus**, sp. (The Bushbuck)].

“‘Mbawala’ of the Chikunda and Lake tribes, ‘Mkwiwa’ of the Asenga.

“Common in the more wooded parts of the country. It is somewhat wary and old males are hard to find.”

1 ♂.

[**Strepsiceros strepsiceros**. (The Kudu)].

“‘Ngoma’ of the Lake tribes, ‘Mpulupulu’ of the Asenga.

“This magnificent antelope is fairly common and very widely distributed over the country, but is exceedingly wary.”

1 ♂, 1 ♀.

[**Taurotragus oreas** (The Eland)].

“‘Nchefu’ and ‘Nsefu’ of Asenga and Lake tribes, ‘Nsongo’ of the Alala.

“The Eland is fairly numerous, preferring the more open country. The specimens I met with all belonged to the striped tan-coloured form.”

[**Bubalus caffer** (The African Buffalo)].

“‘Njati, nzati,’ of the Lake tribes, ‘Mboo’ of the Asenga, ‘Kakuli’ of the Alala.

“Buffaloes are now exceedingly scarce having suffered much from the Rinderpest of some 10 years ago. There are still a few scattered herds of small size in the country. I succeeded in obtaining a solitary old bull the only one I met with.”

1 ♂.

[**Manis**, sp.].

“ A species of *Manis* appears to be known to natives from the mid Zambesi Valley, and it is not unusual to see its scales worn by them as charms. Further north, except from Nyasaland, I could hear of no record of its occurrence.”

[**Orycteropus afer** (The Aard-vark)].

“ ‘Mpendwa’ of most native tribes.

“ Common all over the country, but owing to its nocturnal habits never seen. It is very occasionally dug out of its burrow by natives.”
